

WHAT IS CLAIMED IS

1. (Currently Amended) A mini-fan having
a housing defining an air inlet opening (14):
a fan wheel (64) equipped with fan blades (80) for pulling air
in through said air inlet opening (14);
an electrical drive motor (61) for driving that fan wheel,
said drive motor (61) including
a permanent-magnet external rotor (62);
an internal stator (90), having sheet-metal pole pieces (88,
110) formed with claw poles which interdigit with each other, and
a coil former (57) located between said pole pieces (88, 100)
and having a central portion (54) connecting two mutually opposed
side pieces (50, 56), wherein at least one of said side pieces (50)
serves as a carrier for electrical components (96, 98) of said drive
motor (61).

2. (Currently Amended) The mini-fan according to claim 1,
wherein
the carrier (50) is formed with orifices (122, 124) for
insertion of the claw poles of the pole piece (110) adjacent to it.

3. (Currently Amended) The mini-fan according to claim 2,
wherein
at least the pole piece (110) adjacent to the carrier (50)
is equipped, at least locally, with a plastic part (114, 116)
that is fixedly bound to the carrier (50).

4. (Currently Amended) The mini-fan according to claim 3,
wherein the plastic part (114, 116) extends
into a region between two adjacent claw poles (84, 86).

5. (Currently Amended) The mini-fan according to claim 3, wherein

the plastic part (114, 116) is equipped, on its side adjacent to the carrier (50), with a projection (120), which projection is welded to the carrier (50).

6. (Currently Amended) The mini-fan according to claim 3, wherein

the plastic part (114, 116) extends at least partially over at least one of said claw poles (84, 86).

7. (Currently Amended) The mini-fan according to claim 6, wherein a claw pole (84, 86) is equipped with recesses (126) into which plastic of the plastic part (114, 116) engages.

8. (Currently Amended) The mini-fan according to claim 1, further comprising

a tube (52) made of soft ferromagnetic material, arranged inside the coil former (57).

9. (Currently Amended) The mini-fan according to claim 8, wherein the tube (52) of ferromagnetic material functions as a magnetic return path for the pole piece (88, 110).

10. (Currently Amended) The mini-fan according to claim 8, wherein the tube (52) is equipped, near the carrier, with at least one recess that extends over a portion of the tube periphery and through which plastic of the coil former (57) extends into the interior of the tube (52).

11. (Currently Amended) The mini-fan according to claim 10, wherein the plastic that extends into the interior of the tube (52) is configured to serve as part of an axial bearing for journaling the permanent-magnet external rotor (62).

12. (Currently Amended) The mini-fan according to claim 1, wherein said fan housing (12) defines a generally circular air inlet opening (14) and

a sealing ring (24) of elastomeric material is provided adjacent a rim of said air inlet opening (14).

13. (Currently Amended) The mini-fan according to claim 12, wherein the sealing ring (24) is arranged on a circuit board (22) that is provided adjacent the air inlet opening (14).

14. (Currently Amended) The mini-fan according to claim 13, further comprising
a temperature sensor (28), arranged on the circuit board (22).

15. (Currently Amended) The mini-fan according to claim 14, wherein the circuit board (22) comprises a strut (26) that extends into an airflow path defined by said air inlet opening (14) and serves as a carrier for the temperature sensor (28).

16. (Currently Amended) The mini-fan according to claim 1, wherein a temperature sensor (28) is provided; and conductors (140, 142) leading to the temperature sensor (28) are applied onto housing portion (144) of said fan using a hot-stamping method.

17. (Currently Amended) The mini-fan according to claim 1, wherein the fan blades (80) extend substantially parallel to the rotation axis (82) of the mini-fan.

18. (Currently Amended) The mini-fan according to claim 1, wherein said housing (20; 220) has
at least one lateral air outlet opening (16).

19. (Currently Amended) The mini-fan according to claim 1, further comprising mounting feet (53; 36', 38') that also serve, at least in part, for electrical connection of the fan.

20. (Currently Amended) The mini-fan according to claim 1, wherein a two-phase stator winding (58) that is wound in bifilar fashion is provided on the coil former (57).

21. (Currently Amended) The mini-fan according to claim 1, wherein a housing part (212), in which at least one permanent magnet (226, 228) is mounted by plastic injection molding, is provided adjacent the rotor (62).

22. (Currently Amended) The mini-fan according to claim 21, wherein the at least one permanent magnet is implemented as a plastic-matrix flexible magnet (226, 228).